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THE
EIGHTEENTH ANNUAL REPORT

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CAMBRIDGE, MASS.

OF THE

BOARD OF DIRECTORS

OF THE

ZOOLOGICAL SOCIETY

OF PHILADELPHIA.

(INCORPORATED MARCH 21ST, 1859.)

READ AT THE ANNUAL MEETING OF THE MEMBERS AND LOAN-
HOLDERS OF THE SOCIETY.

APRIL 24th, 1890.

PHILADELPHIA :

ALLEN, LANE & SCOTT'S PRINTING HOUSE,
Nos. 229-231-233 South Fifth Street.

1890.

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THE
ZOOLOGICAL SOCIETY OF PHILADELPHIA.

OFFICE, FAIRMOUNT PARK.

OFFICERS FOR THE YEAR ENDING APRIL 23d, 1891.

PRESIDENT,
CHARLES PLATT.

VICE-PRESIDENTS:
GEORGE W. CHILDS, J. VAUGHAN MERRICK.

CORRESPONDING SECRETARY,
PROF. HENRY C. CHAPMAN.

RECORDING SECRETARY,
THOMAS HOCKLEY.

TREASURER,
WILLIAM HACKER.

DIRECTORS:

| | |
|---------------------|--------------------------|
| WILLIAM H. MERRICK, | GALLOWAY C. MORRIS, |
| HENRY C. GIBSON, | HENRY T. COATES, |
| ISAAC J. WISTAR, | FRANCIS W. LEWIS, M. D., |
| CHARLES W. TROTTER, | CHARLES M. LEA, |
| PROF. JOSEPH LEIDY, | CHRISTIAN C. FEBIGER, |
| FRANCIS T. FASSITT, | WM. L. SPRINGS. |

ACTUARY,
CHARLES L. JEFFERSON.

SUPERINTENDENT OF THE GARDEN,
ARTHUR ERWIN BROWN.

SOLICITORS:
SAMUEL WAGNER, WM. W. MONTGOMERY.

REPORT OF THE BOARD OF DIRECTORS.

PHILADELPHIA, April 24th, 1890.

THE Board of Directors of the Zoological Society of Philadelphia submit to the members and loan-certificate holders this their Eighteenth Annual Report of the business and operations of the Society from 1st of March, 1889, to 1st of March, 1890.

MEMBERS.

The number of members on the 1st of March, 1890, was—

| | |
|---------------------------------|-------|
| Annual members | 450 |
| Life members | 1,156 |
| Corresponding members | 7 |
| Honorary members | 13 |
| Perpetual members | 257 |

Total members (exclusive of loan-holders) 1,883

The Board of Directors again call the attention of all those interested not only in the welfare but in the existence of the Garden, to the continued efforts made to retire the loan of the Society. Voluntary gifts of this loan, or its conversion into life and perpetual memberships, would remove from the Society all probable danger of financial

embarrassment, such as overtook it in the year 1885. The cancellation of the loan, which can only be done when the whole is secured, would increase the annual revenue of the Society about \$4000, otherwise lost by the yearly issue of admission tickets due the loan-holders. As stated in a circular sent out by the Board of Directors in 1887, "One of the most efficient plans for permanent relief would be the possession of the existing loan of the Society."

The necessity for the erection of a new monkey-house has become so urgent that the Board has determined to prepare plans for the building. The present monkey-house is totally unsuitable for its purpose, being dangerous to the lives of the animals and unfit for visitors to enter.

The death of Mr. Frederic Graff, the President of the Society, has occurred since the publication of the last annual report. At a meeting of the Board, held April 3d, 1890, the following minute was adopted:—

"Mr. Graff was the only remaining member of the Board who had been connected with the Society from its organization more than thirty years ago, and who has retained an active interest in its affairs since the period when, under a revival of public interest, the present Garden was laid out.

"To his clear judgment and intelligent appreciation of the objects which should be held in view in the establishment and maintenance of a Zoological Garden, is due much of the success which has been attained. The Directors feel that it is difficult to overestimate the advantage which has been derived from his wise counsel, as well as from his zealous interest and attention to its affairs, especially during the time he has occupied the position of President.

"Beyond this acknowledgment of his public services to the Society, the Directors feel that they have been deprived of a friend, always kind, considerate, and courteous; and that any words of eulogy or sorrow are inadequate to express their sense of personal loss.

"They tender to his widow their most respectful sympathy in her bereavement."

The following is a report in detail of the admissions and receipts for the year :—

| | |
|---|---------|
| Adults (paying twenty-five cents at gates) | 117,028 |
| Children (paying ten cents at gates) | 33,755 |
| Members (including Life and Annual Members, loan-holders' annual, and complimentary annual tickets) | 3,373 |
| Loan-holders' single tickets | 38,611 |
| Free admissions (charitable institutions, donors' tickets, &c.) | 2,431 |
| Coupon tickets | 3,353 |
| Excursion tickets | 17,052 |
| | <hr/> |
| | 215,603 |
| | <hr/> |

*Monthly Record of Visitors for 1889-90, with corresponding
account for 1888-89.*

| MONTH. | 1888-89. | 1889-90. | COMPARISON. |
|---------------------|----------|----------|---------------------|
| March | 4,461 | 11,179 | Increase . . 6,718 |
| April | 14,213 | 16,759 | " . . 2,546 |
| May | 18,211 | 21,541 | " . . 3,330 |
| June | 19,746 | 22,443 | " . . 2,697 |
| July | 29,353 | 25,299 | Decrease . . 4,054 |
| August | 28,754 | 39,240 | Increase . . 10,486 |
| September | 26,528 | 27,615 | " . . 1,087 |
| October | 13,552 | 16,272 | " . . 2,720 |
| November | 11,389 | 10,946 | Decrease . . 443 |
| December | 10,821 | 10,544 | " . . 277 |
| January | 8,029 | 6,919 | " . . 1,110 |
| February | 5,893 | 6,846 | Increase . . 953 |
| | <hr/> | <hr/> | <hr/> |
| | 190,950 | 215,603 | Increase . . 24,653 |

Average daily admissions 591

The greatest number of visitors on any one day was
on Sunday, August 18th 3,827

*Monthly Record of Receipts from Admission for 1889-90, with
corresponding account for 1888-89.*

| MONTH. | 1888-89. | 1889-90. | COMPARISON. |
|-------------|-------------|-------------|-----------------------|
| March . . . | \$812 54 | \$2,105 98 | Increase . \$1,293 44 |
| April . . . | 2,520 32 | 2,974 15 | " . 453 83 |
| May . . . | 3,079 86 | 3,679 47 | " . 599 61 |
| June . . . | 3,141 87 | 3,661 66 | " . 519 79 |
| July . . . | 4,848 36 | 3,936 55 | Decrease . 911 81 |
| August . . | 4,265 84 | 5,970 72 | Increase . 1,704 88 |
| September . | 4,274 68 | 4,579 81 | " . 305 13 |
| October . . | 2,268 36 | 2,766 49 | " . 498 13 |
| November . | 1,925 98 | 1,808 92 | Decrease . 117 06 |
| December . | 1,968 55 | 1,763 62 | " . 204 93 |
| January . . | 1,466 34 | 1,264 79 | " . 201 55 |
| February . | 1,088 59 | 1,240 27 | Increase . 151 68 |
| | \$31,661 29 | \$35,752 43 | Increase . \$4,091 14 |

Average daily receipts from admissions \$97 95

The largest amount of receipts at the gates on any

one day was on Sunday, September 29th . . . 668 43

Total Receipts on the several days of the week, and their respective averages, for 1889-90.

| RANK. | DAYS. | TOTAL RECEIPTS. | AVERAGE. |
|-------|---------------------|-----------------|----------|
| 1 | Sunday | \$16,877 47 | \$324 56 |
| 2 | Thursday | 4,053 16 | 77 95 |
| 3 | Saturday | 3,593 49 | 69 11 |
| 4 | Wednesday | 2,938 10 | 56 50 |
| 5 | Friday | 2,898 35 | 54 69 |
| 6 | Monday | 2,717 29 | 52 26 |
| 7 | Tuesday | 2,674 57 | 51 43 |
| | | \$35,752 43 | |

The financial condition of the Society is fully shown in the Treasurer's statement, Appendix A, and the report of the General Superintendent, Appendix B, shows the present condition of the menagerie and the details attending the operation of the Garden during the year.

The Board desires to express its thanks for the many donations of animals which have been received.

By order of the Board,

THOMAS HOCKLEY,
Secretary.

INCOME AND EXPENDITURES.

For the fiscal year ending March 1st, 1890.

INCOME.

| | | |
|----------------------------------|------------|-------------|
| Members' fees and dues | \$1,155 00 | |
| Admission receipts | 35,752 43 | |
| Rents at Garden | 1,200 00 | |
| Interest, discount, &c. | 843 60 | |
| Sundry receipts | 643 68 | |
| Citizens' relief fund | 1,000 00 | |
| | <hr/> | \$40,594 71 |

EXPENDITURES.

(Exclusive of Permanent Improvements, &c.)

| | | |
|--|-------------|-------------|
| Salaries | \$18,115 85 | |
| Office expenses | 219 44 | |
| General expenses | 16,609 82 | |
| | <hr/> | \$34,945 11 |
| Estimated loss on animals | 4,142 30 | |
| Depreciation on permanent improvements | 1,753 00 | |
| | <hr/> | \$40,840 41 |
| Balance to debit of profit and loss for year . . . | 245 70 | |
| | <hr/> | \$40,594 71 |

CAPITAL.

Receipts and expenditures for the year ending March 1st, 1890.

RECEIPTS.

| | | |
|---|------------|------------|
| Legacy, estate of John L. Neill, deceased | \$3,400 00 | |
| Add the following amounts charged to profit and loss :— | | |
| Estimated loss on animals | 4,142 30 | |
| Depreciation on permanent improvements | 1,753 00 | |
| | <hr/> | \$9,295 30 |

EXPENDITURES.

| | | |
|--|------------|------------|
| Horticulture and animals as per items in Treasurer's statement (Appendix A) | \$3,947 95 | |
| Balance (being excess of investments over receipts of capital and provided from profit and loss) | 5,347 35 | |
| | <hr/> | \$9,295 30 |

APPENDIX A.

TREASURER'S STATEMENT.

From March 1st, 1889, to March 1st, 1890.

| | DR. | |
|---|------------|------------|
| To Balance March 1st, 1889 | | \$4,112 14 |
| " Collateral loan | | 5,000 00 |
| " Legacy, estate of John L. Neill, deceased | | 3,400 00 |
| " Members' fees and dues | \$1,155 00 | |
| " Admission receipts | 35,752 43 | |
| " Rents at Garden | 1,200 00 | |
| " Sundry receipts | 643 68 | |
| " Interest, discount, &c. | 843 60 | |
| " Citizens' relief fund | 1,000 00 | |

Transferred to credit of profit and loss 40,594 71

\$53,106 85

| | CR. | |
|--|-------------|--|
| By warrants paid for:— | | |
| Salaries and wages | \$18,115 85 | |
| Office expenses | 219 44 | |
| Subsistence | 6,948 48 | |
| Advertising | 2,816 61 | |
| Insurance | 218 25 | |
| Fuel and lights | 1,045 25 | |
| Printing | 391 75 | |
| Expressage | 147 35 | |
| Repairs, &c. | 1,940 98 | |
| Extra labor and jobbing | 1,405 85 | |
| Hardware and tools | 208 82 | |
| Lumber | 176 41 | |
| Water-rent | 150 00 | |
| Uniforms and equipments | 219 25 | |
| Guide-book account (balance) | 239 50 | |
| Commissions on collections | 139 90 | |
| Sundries | 561 42 | |

Transferred to debit of profit and loss \$54,945 11

Purchase of animals \$3,884 30

Horticulture 63 65

Investment account 3,400 00

7,347 95

Collateral loan 5,000 00

Balance on hand March 1st, 1890 5,813 79

\$53,106 85

WILLIAM HACKER, *Treasurer.*

Examined and found correct.

FRANCIS T. FASSITT,

FRANCIS W. LEWIS, M. D.,

Committee on Audit.

BALANCE-SHEET.
Zoological Society, March 1st, 1890.

Dr.

Cr.

| | | | |
|-------------------------------------|---------------------|----------------------------|---------------------|
| Cash | \$5,813 79 | Loan | \$319,900 00 |
| Collateral loan | 5,000 00 | Donations | 11,835 74 |
| Investment account | 17,500 00 | Life memberships | 9,835 00 |
| Water-supply and drains | 11,583 37 | Permanent fund | 12,400 00 |
| Animal account | 47,318 00 | Profit and loss | \$6,642 04 |
| Eagle aviary | 2,744 19 | | |
| Bear pits | 6,618 48 | | |
| Monkey house | 7,926 80 | | |
| Cages | 4,252 94 | | |
| Fencing | 3,843 75 | | |
| Vulcanite walks | 33,156 96 | | |
| Deer parks and enclosures | 5,056 20 | | |
| Prairie-dog village | 890 64 | | |
| Gate houses | 11,705 21 | | |
| Buffalo house | 1,494 15 | | |
| Horticulture | 8,046 50 | | |
| Lake | 10,447 50 | | |
| Walks, roads, and grading | 64,924 96 | | |
| Houses for sundry animals | 6,525 71 | | |
| Carnivora house | 55,638 48 | | |
| Greenhouses | 4,622 47 | | |
| Barn | 3,557 12 | | |
| Elephant house | 40,672 08 | | |
| Seal ponds | 4,749 75 | | |
| Carriage sheds | 3,681 11 | | |
| Restaurant | 14,341 96 | | |
| Settees and chairs | 2,124 00 | | |
| Photograph stand | 699 20 | | |
| New aviary | 12,525 75 | | |
| Deer house | 20,624 71 | | |
| Reptile house | 7,000 00 | | |
| Camel house | 886 82 | | |
| Small mammal house | 1,659 00 | | |
| Music stand | 1,583 65 | | |
| Permanent enclosure | 9,150 84 | | |
| Yard and store-room | 2,203 04 | | |
| | <u>\$440,632 78</u> | | <u>\$440,632 78</u> |

APPENDIX B.

To the Board of Directors of the Zoological Society of Philadelphia :

GENTLEMEN:—I have the honor to submit to you my report for the year ending on the 28th of February, 1890.

At that date the animals comprised in the collection numbered as follows:—

| | |
|-------------------------|-------------------|
| 337 Mammals | \$41,057 00 |
| 458 Birds | 5,154 00 |
| 241 Reptiles | 851 00 |
| 33 Amphibians | 256 00 |
| <hr/> 1,069 | <hr/> \$47,318 00 |

The additions for the year from all sources were:—

MAMMALS:—

| | |
|---------------------|-----------|
| Purchased | 96 |
| Presented | 80 |
| Bred | 47 |
| | <hr/> 223 |

BIRDS:—

| | |
|---------------------|-----------|
| Purchased | 120 |
| Presented | 80 |
| Bred | 18 |
| | <hr/> 218 |

REPTILES:—

| | |
|---------------------|-----------|
| Purchased | 368 |
| Presented | 162 |
| Bred | 3 |
| | <hr/> 533 |

AMPHIBIANS:—

| | |
|---------------------|-------------|
| Purchased | 90 |
| Presented | 39 |
| | <hr/> 129 |
| | <hr/> 1,103 |

The number of specimens received, which had not previously been represented in the collection, has been greater than usual. A full list of them is given below, with brief notes on some of the rarer species.

MAMMALS:—

1. Hocheur monkey (*Cercopithecus nictitans*), West Africa.
2. Tamarin marmoset (*Midas ursulus*), Brazil.
3. Caracal (*Felis caracal*), southern Asia and Africa. This small and handsome species is by no means common in menageries in this country, and is a valuable addition to the series of cats.
4. Black-backed jackal (*Canis mesomelas*), South Africa.
5. Prairie fox (*Canis macrurus*), western United States. Several specimens of the large western red fox were received on the 25th June, having been captured at an altitude of ten thousand feet in the Spanish Peaks, near Trinidad, Col. A comparison with specimens of the common species (*C. vulpes fulvus*) in the adjoining enclosure would seem to render it doubtful if the form is entitled to rank even as a variety.
6. Grison (*Galictis vittata*), South America.
7. Sloth bear (*Melursus labiatus*), India. Though well known, this species has never before been represented in the Garden, and as the specimen purchased on the 18th July is a very fine one, it is a most welcome addition.
8. Southern gray squirrel (*Sciurus carolinensis carolinensis*), southern United States.
9. Yuma spermophile (*Spermophilus tereticaudatus*), southwestern United States. Four specimens of this rare and interesting species were presented in July by Mr. Herbert Brown, of Tucson, Arizona.
10. Azara's opossum (*Didelphys azarae*), South America.
11. A specimen of the great kangaroo from western Australia, purchased June 4th. This is the form usually recognized as *Macropus ocydromus*, Gould. It is difficult, however, to see wherein it differs from the common species (*M. giganteus*), with which it has been placed, and, in fact,

Mr. Oldfield Thomas, the latest authority on the group, fails to recognize a distinction.

BIRDS:—

12. American redstart (*Setophaga ruticilla*), eastern United States.

13. Greater tit (*Parus major*), Europe.

14. Red-eared bulbul (*Pycnonotus jocosus*), India and China.

15. Black bulbul (*Pycnonotus pygæus*), India and Ceylon.

16. Magpie tanager (*Cissopis leverianus*), South America. A specimen of this rare species was purchased from a dealer in New York, in January, 1890, and at the same time another tanager, which I have not yet been able to identify; it is, perhaps, a young female of *Tanagra palmarum*.

17. Masked weaver (*Hyphantornis larvatus*), Abyssinia.

18. Black-crested cardinal (*Gubernatrix cristata*), Argentine Republic.

19. White-fronted finch (*Spermophila lineola*), Guiana to Brazil.

20. Mountain linnet (*Linota flavirostris*), Europe.

21. Yellow hangnest (*Cassicus persicus*), South America. A pair of these fine troupials, rarely seen in captivity, were purchased in June from a dealer.

22. Chinese mynah (*Acridotheres cristatellus*), China.

23. Green jay (*Xanthura luxuosa*), eastern Mexico.

24. Great spotted woodpecker (*Picus major*), Europe.

25. Black-billed cuckoo (*Coccygus erythrophthalmus*), eastern North America.

26. Grand eclectus (*Eclectus grandis*), Moluccas.

27. West African love-bird (*Agapornis pullaria*), West Africa.

28. Many-colored parrakeet (*Psephotus multicolor*), Australia. One of the rarer and most striking of the brilliant parrakeets of the Australian region.

29. Yellow-bellied parrakeet (*Platycercus flaviventris*), Tasmania.

30. Blue-crowned conure (*Conurus hæmorrhous*), Brazil.

31. Long-tailed conure (*Conurus euops*), West Indies.

32. Blue-fronted amazon (*Chrysotis æstiva*), South America.

33. Yellow-shouldered amazon (*Chrysotis ochroptera*), South America.

34. Great eagle-owl (*Bubo ignavus*), Europe and northern Asia. Three specimens of this fine species, which has rarely been brought to the United States, were among a small collection of birds and reptiles brought from Europe for the Society by Mr. F. Moesler, a well-known bird-dealer of Philadelphia.

35. Mexican screech-owl (*Scops asio trichopsis*), Mexico and Arizona. This rare bird was contributed by Mr. Herbert Brown, of Tucson, but unfortunately did not long survive its journey.

36. Wood owl (*Syrnium aluco*), Europe.

37. Spectacled owl (*Syrnium perspicillatum*), Mexico to Brazil. One young specimen, from Brazil, was presented in December by Mr. Herman Reiche, of New York.

38. Common partridge (*Perdix cinerea*), Europe and northern Africa.

39. Short-crested quail (*Eupsychortyx parvicristatus*), South America. A rare species from Guiana, purchased in May.

40. Barbary partridge (*Caccabis petrosus*), North Africa.

41. Abyssinian guinea-fowl (*Numida ptilorhyncha*), Abyssinia.

42. Black-faced ibis (*Theristicus caudatus*), South America.

REPTILES:—

43. Black tortoise (*Testudo carbonaria*), South America. Two specimens purchased during the summer, together with several of the closely-related and, perhaps, identical *T. tabulata*.

44. Yellow-bellied terrapin (*Pseudemys scabra*); red-eared terrapin (*P. elegans*); Troost's terrapin (*P. troosti*); Mobile terrapin (*P. mobilensis*). Specimens belonging to the above species were found in several lots of North American turtles purchased during the season, the three former being among the least common forms. The red-eared and Troost's are of considerable rarity.

45. Alligator snapping-turtle (*Macrochelys lacertina*), Uni-

ted States. This large turtle, while common to the streams flowing into the Gulf of Mexico, has rarely been exhibited in the North. Three specimens of large size were procured from New Orleans, and have attracted much notice in the fountain basin in the new Reptile House.

46. Spiny soft-shelled turtle (*Aspideronectes spinifer*), United States. One specimen. Captured in Penhawken creek, New Jersey, and presented by Mr. J. Wallace.

47. Punctated gecko (*Sphaerodactylus punctatissimus*), Cuba. This interesting little lizard was presented by Mr. E. Metelman, of Philadelphia, having been found in a bundle of plants which were shipped to him from Havana.

48. Chamæleon-like lizard (*Chamæleolis chamæleontides*), Cuba. Few inmates of the Reptile House have attracted more notice from their extraordinary and grotesque form than the two specimens of this rare species, purchased in August.

49. Equestrian lizard (*Anolis equestris*), Cuba.

50. Sagra's lizard (*Anolis sagræ*), Cuba and eastern Central America. Several specimens of this species were found among a number of the common chamæleon lizards which came in August from Cuba. Among them are also several others, which it is not possible to determine with certainty while in a living state, but which appear to be *Anolis lucius*.

51. Spiny lizard (*Sceloporus spinosus*), Mexico and southwestern United States. One specimen presented by Mr. Colin Cameron, San Rafael, Arizona.

52. Regal horned-lizard (*Phrynosoma regale*), Arizona. One of the phrynosomas rarely seen in living collections. Procured at Tempe, A. T., and donated by Prof. C. S. Dolley, Biological School, University of Pennsylvania.

53. Spotted monitor (*Varanus varius*), Australia.

54. Variegated teguixin (*Tupinambis teguixin*), South America.

55. Stump-tailed lizard (*Trachysaurus rugosus*), Australia.

56. Basilisk chamæleon (*Chamæleon basiliscus*), Africa. Four young specimens of this species were among the collection brought in September by Mr. Moesler.

57. Leconte's snake (*Rhinochilis lecontei*), Arizona. One

specimen. Presented by Mr. Herbert Brown, whose indefatigable energy has enriched the collection by many rare species from the Arizonan district.

58. Osceola's snake (*Oseola clapsoides*), southeastern United States.

59. Worm snake (*Carphophiops amantus*), eastern United States.

60. Helen's snake (*C. helena*), central and southern United States.

61. Virginia's snake (*Virginia valeria*), eastern United States.

62. Irwin's snake (*Hypsiglena ochrorhyncha chlorophæa*), Arizona. One specimen. Presented by Mr. Herbert Brown.

63. Angulated snake (*Dromicus angulifer*), West Indies. Several snakes belonging to the genus *Dromicus*, received July 4th, from the Isle of Pines, have been referred with some hesitation to the above variable species, with which they agree closely in form and scutellation. All of the specimens received, however, present color-markings of so decided a character that I am disposed to believe that they may prove to be a distinct species.

64. Four-rayed snake (*Elaphis quaterradiatus*), Europe.

65. Æsculapian snake (*Coluber æsculapii*), Europe.

66. Four-lined snake (*Coluber quadrilineatus*), Europe. The one specimen of this species received was of the spotted variety (*leopardinus*).

67. Common snake (*Tropidonotus natrix*), Europe.

68. Marcy's garter snake (*Eutænia marciana*), Texas to California. One specimen of this beautiful snake—one of the largest of the genus—presented by Mr. H. Brown.

69. Black-sided garter snake (*Eutænia nigrolateris*), Arizona. A *Eutænia* received from Tucson, Ariz., on the 23d of September, through the kindness of Mr. Herbert Brown, on examination proved to belong to a well-marked and previously unknown species. It was described by me, under the above name, in the Proceedings of the Academy of Natural Sciences of Philadelphia, 1889, page 421.

70. Black hog-nosed snake (*Heterodon platyrhinos niger*), United States. Several specimens received from Florida

appear to be readily distinguishable from wholly black individuals of *H. platyrhinos atmodus*.

AMPHIBIANS:—

71. Wood-frog (*Rana silvatica*), Canada and northeastern United States.

72. Squirrel tree-frog (*Hyla squirella*), southeastern United States.

73. Brown salamander (*Plethodon cinereus cinereus*), eastern United States.

74. Slimy salamander (*Plethodon glutinosus*), eastern United States.

Other valuable additions were five sirens (*Siren lacertina*), presented by Dr. G. E. Manigault, of Charleston, S. C.; a female Dorcas gazelle (*Gazella dorcas*), which was imported to mate the male *G. subgutturosa* previously in the collection, but which, on arrival, proved to be of the former species; three Gillespie's hair seals (*Zalophus californianus*), a male and female, with a young male born five days previous to arrival at the Garden; a crab-eating fox (*Canis cancrivorus*) from Demerara, and three Richardson's spermophiles (*S. richardsoni*) from Dakota, presented by Mr. Frank J. Thompson, of New York; two Agassiz' tortoises (*Xerobates agassizi*), a second specimen of the horse-snake (*Chilomeniscus ephippicus*), a number of Gila monsters (*Heloderma suspectum*) and Arizona rattlesnakes (*C. adamanteus atrox*), presented by Mr. Herbert Brown; a specimen of the cock of the rock (*Rupicola crocea*), from South America; a second specimen of the rare iguana from the Isle of Pines (*Cyclura nubila*); two kusimanse (*Crossarchus obscurus*), one of the least common of the viverrine carnivores from West Africa; a darter or water turkey (*Plotus anHINGA*), from South America, all of which were procured by purchase, and a king lory (*Apros-mictus scapulatus*), presented by Mrs. Scott, of Philadelphia—being the first specimen of this splendid parrakeet which has been in the possession of the Society for a number of years.

The following animals were bred in the Garden:—

3 Lions (*Felis leo*).

1 Leopard (*Felis pardus*), 6th November.

- 6 Prairie Wolves (*Canis latrans*), 23d April and 1st May.
- 1 Black Bear (*Ursus americanus*), 30th January.
- 10 Prairie Dogs (*Cynomys ludovicianus*), May.
- 2 Beaver (*Castor fiber canadensis*), July.
- 2 Zebras (*Bos indicus*), 9th March and 5th August.
- 2 Bison (*Bison americanus*), 1st May and 7th June.
- 1 Indian Buffalo (*Bubalus buffelus*), 20th September.
- 1 Indian Antelope (*Antelope cervicapra*), 1st August.
- 2 Hog Deer (*Cervus porcinus*), 21st April and 13th February.
- 3 Common Deer (*Cariacus virginianus*), 27th April and 15th June.
- 1 Fallow Deer (*Cervus dama*), 5th July.
- 1 American Elk (*Cervus canadensis*), 30th June.
- 1 Red Kangaroo (*Macropus rufus*), 4th July.
- 1 Kangaroo; hybrid between *Halmaturus derbianus* ♂ and *H. dorsalis* ♀, 20th May.
- 1 Brush-tailed Kangaroo (*Petrogale pencillata*), 23d January.
- 9 Common Opossums (*Didelphys virginiana*), 10th July.
- 1 Zebra Finch (*Estrela subflava*), 9th June.
- 3 Peafowl (*Pavo cristata*), 7th June.
- 7 Egyptian Geese (*Chenalopex ægyptiaca*), 24th May and 3d October.
- 7 Red-headed Ducks (*Fuligula ferina americana*), 3d July.
- 3 King Snakes (*Ophibolus getulus*), 3d November.

The actual loss by death has been below the average, a considerable portion of the amount so charged being the customary depreciation in value, of the older animals in the collection.

No new work has been undertaken during the year, the only expenditures for labor, outside of the regular Garden force, being for such repairs as were required for the proper protection of buildings and enclosures.

Respectfully,

ARTHUR ERWIN BROWN,

General Superintendent.

ZOOLOGICAL GARDEN, 1st March, 1890.

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